WATER DIVERSION AND DISCHARGE POINTS ALONG THE SAN JOAQUIN RIVER: MENDOTA POOL DAM TO MOSSDALE BRIDGE

Volume 2-B: Appendix B

San Joaquin River Water Diversions Beneficial Use Survey

(Lander Avenue Bridge to Airport Way)

California Regional Water Quality Control Board
Central Valley Region
3443 Routier Road
Sacramento, CA 95827-3098

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APPENDIX B

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Introduction

The discharge of agricultural drainage water is having potential impacts on users of San Joaquin River water. One of the prime beneficial uses of the San Joaquin River is agriculture, especially in the river section from the Lander Avenue Bridge (River Mile 132.8) to Airport Way Bridge (Vernalis) (River Mile 72.3). Regulation of the discharge of agricultural drainage requires the review and updating of the basin plan including a review of beneficial uses and the water quality objectives needed to protect those uses. In order to review water quality needs for San Joaquin River users, a survey was conducted in the spring and summer of 1985-86 to identify all water diversion points on the San Joaquin River. At each site, the type of use was recorded along with the number of acres irrigated. Often the river water only supplies a portion of the water supply used on the irrigated land; however, during short periods (weeks) it may be the only supply.

There are 48 points of diversion within the river reach studied. These diversion points are used to supply all or a portion of the irrigation supply to over 60,000 acres of land. The greatest portion of this irrigated land (53,900 acres) lies to the west of the San Joaquin River. The diversion sites are listed in Table B-1 along with the approximate acreage served and the crops most frequently grown. The discussion that follows summarizes the diversion activity within each river section.

River Sections

River Section 9 - Lander Avenue Bridge to Upstream of Salt Slough

There is one diversion point on this section of the river (see Figure B-1): the Stevinson Water District Pike Pump (SJE130.5P). It is located on the east bank and supplies water to approximately 500 acres. Use of this land alternates between pasture, alfalfa, and field corn.

River Section 10 - Salt Slough to Fremont Ford Bridge (Highway 140)

There are no diversions on this reach of the river.

River Section 11 - Fremont Ford Bridge (Highway 140) to Upstream of Mud Slough (north)

There is one diversion point on this reach of the river (see Figure B-2): Stevinson Water District Fremont Pump (SJE125.0P). It is located on the east bank and it supplies water to 300 acres for irrigation of pasture, field corn, and oats.

River Section 12 - Mud Slough to Hills Ferry Road Bridge

There are no diversion points on this reach of the river.

Table B-1 Irrigation Use of Diversion Water from the San Joaquin River from Lander Avenue Bridge to Airport Way (Vernalis)

River Mileage[1/]	Acres Irrigated		Crops
SJE130.5P	500		pasture, alfalfa, field corn
SJE125.0P	300		pasture, field corn, oats
SJW117.0P	180		field corn, alfalfa
SJE115.6P	450		alfalfa, field corn, oats
SJE110.5P	159		pasture
SJE110.1P	95		field corn, oats
SJW110.0P	200	(discontinued 1981)	alfalfa, pasture
SJW109.7P	210		bean, spinach, field crops
SJE109.2P	90		alfalfa, field beans
SJE108.5P	350		field corn, oats
SJE108.4P	80		field corn, oats
SJE108.1P	22		field corn, oats
SJE108.0P	8		pasture, field corn
SJE107.2P	210		field corn, oats
SJE106.2P	430		field corn, alfalfa, pasture
SJE105.2P	250		field corn, alfalfa
SJW104.8p	180		field beans, tomatoes, cantaloupe, alfalfa
SJW104.0P	6,200		field corn, field beans, sugar beets, alfalfa, and others
SJE103.4P	75	(pump removed 7/85)	field corn, alfalfa
SJE100.8P	520		field corn, oats, barley, pasture
SJW098.9P	7		pasture
SJW098.70	5		pasture
SJW098.5P	180		pasture
SJW098.5P	14,000		field beans, sugar beets, field corn, tomatoes, wheat, barley, oats, alfalfa, walnuts, almonds, apricots, spinach, peas, bell peppers, cherries, plums, apples, pistachios, pasture, vegetables
SJW095.5P	80		field crops
SJW092.3P	400		field beans, field corn
SJE091.5P	200		field crops, pasture
SJE090.5P	10		pasture, vegetables
SJW089.6P	300		sugar beets, tomatoes, field corn, field beans, wheat, barley, alfalfa
SJW088.9P	275		field corn, barley
SJE088.7P	200		field crops, pasture, alfalfa
SJE088.4P	120		field corn, pasture, alfalfa
SJE087.5P	460		field corn, field beans, barley, pasture
SJE086.2P	1,100		wheat, tomatoes, alfalfa, sugar beets, pasture, field corn
SJE085.1P	200		field crops, pasture, alfalfa, melons, onions, cauliflower, lima beans

Table B-1 (continued)

River Mileage[1]	Acres Irrigated	Crops
SJW084.0P	24,800	field beans, sugar beets, field corn, tomatoes, wheat, barley, oats, alfalfa, walnuts, almonds, apricots, spinach, peas, bell peppers, cherries, plums, apples, pistachios, pasture, vegetables
SJE080.1P	600	pasture
SJW079.2P	185	field corn
SJW079.2P	134	field corn
SJW078.3P	179	field corn
SJW077.5P	3,700	wheat, tomatoes, alfalfa, sugar beets, field and lima beans, vegetables
SJW077.3P	1,100	wheat, tomatoes, alfalfa, sugar beets, field and lima beans, vegetables
SJW077.2P	450	field corn, sugar beets, grain
SJW075.9P	900	field corn, sugar beets, grain
SJE075.1P	70	pasture
SJE074.3P	165	pears, corn, beans, oats
SJE074.1P	205	grapes
SJW073.0P	220	alfalfa, sugar beets, barley, field beans, tomatoes
	60,750	

[1] Estimated from Corps of Engineers' Records (1984)

SAN JOAQUIN RIVER

Section 9: Lander Avenue Bridge (Hwy. 165) to Upstream of Salt Slough

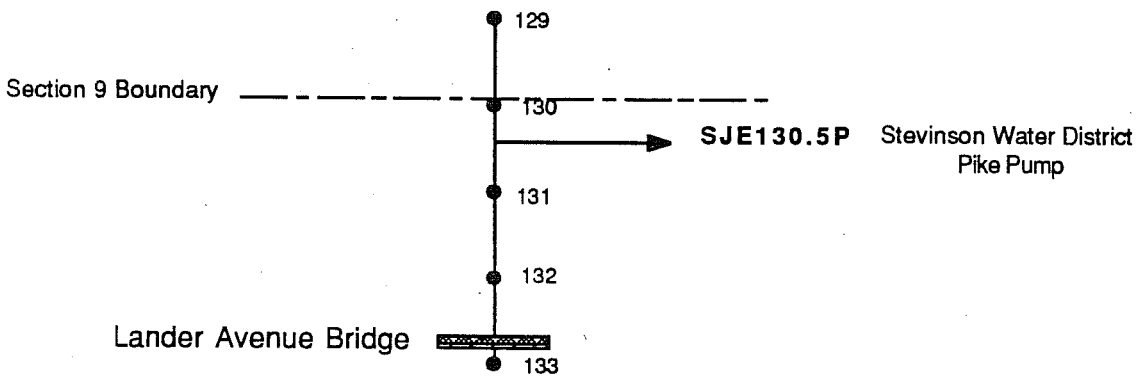

Figure B-1. Water Diversion Points Within River Section 9: Lander Avenue Bridge (Hwy.165) to Upstream of Salt Slough.

SAN JOAQUIN RIVER

Section 11: Fremont Ford Bridge (Hwy. 140) to Upstream of Mud Slough (North)

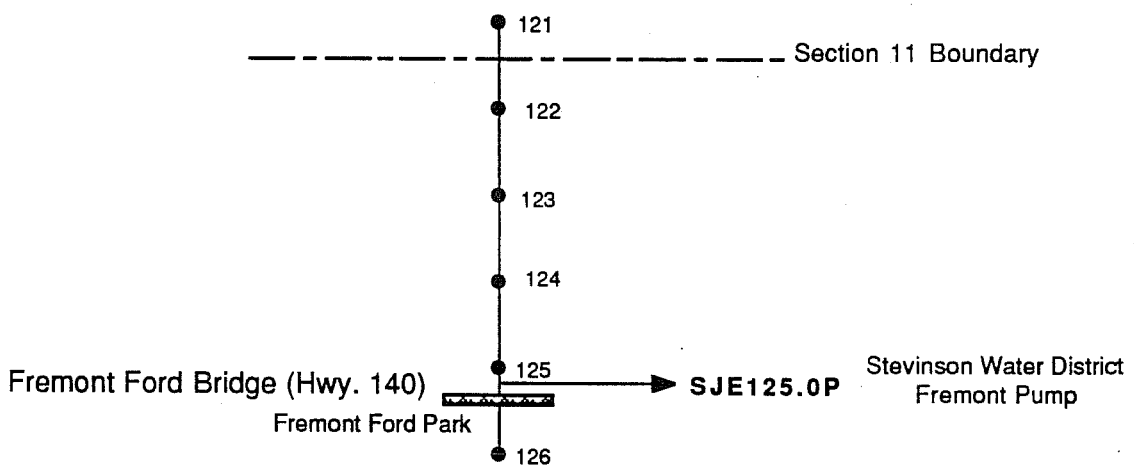

Figure B-2. Water Diversion Points Within River Section 11: Fremont Ford Bridge (Hwy.140) to Upstream of Mud Slough (North)

River Section 13 - Hills Ferry Road Bridge to Crows Landing Road Bridge

There are eleven (11) diversion points on this reach of the river (see Figure B-3). Eight (8) are on the east bank and three (3) on the west bank. The eight east bank pumps supply irrigation water to approximately 1,250 acres used for pasture, alfalfa, and field crops (corn, oats, and beans). The three west bank pumps supply irrigation water to approximately 590 acres used for pasture, alfalfa, field corn, spinach, beans, and other field crops. One of the west side pumps has recently been discontinued (1981) due to poor river water quality.

River Section 14 - Crows Landing Road Bridge to Patterson Bridge

There are eight (8) diversion points on this reach of the river (see Figure B-4): five (5) on the east bank and three (3) on the west bank. The five east bank diversion points supply water for the irrigation of approximately 1,500 acres used for pasture, alfalfa, field corn, oats, and barley. The three west bank diversion points supply irrigation water to approximately 6,400 acres which are used for pasture, alfalfa, field corn, beans, sugar beets, tomatoes, cantaloupe, and other crops.

River Section 15 - Patterson Bridge to Grayson Road Bridge

There are eight (8) diversion points on this reach of the river (see Figure B-5): three (3) on the east bank and five (5) on the west bank. The three east bank diversion points supply irrigation water to approximately 400 acres, most of which is used as pasture. The five diversions points on the west bank supply all or a portion of the irrigation water to approximately 14,700 acres with the Patterson Water District making up 14,000 of these acres. This water is used for the irrigation of beans, sugar beets, tomatoes, field corn, wheat, barley, oats, alfalfa, walnuts, almonds, apricots, spinach, peas, sudan grass, bell peppers, cherries, plums, apples, pistachios, and pasture.

River Section 16 - Grayson Road Bridge to Maze Road Bridge (Highway 132)

There are thirteen (13) diversion points on this reach of the river (see Figure B-6): six (6) on the east bank and seven (7) on the west bank. The six east bank diversion points supply irrigation water to 2,000 to 4,000 acres depending upon the economy. Water is used to irrigate pasture, field corn, beans, barley, and other field crops. On the west bank the seven diversion points supply all or a portion of the irrigation water to over 30,000 acres; 24,800 acres within the West Stanislaus Irrigation District. Crops grown on the west bank include beans, field corn, apricots, walnuts, tomatoes, melons, almonds, onions, cauliflower, peppers, alfalfa, wheat, barley, cherries, sugar beets, and lima beans.

River Section 17 - Maze Road (Highway 132) to Airport Way (Vernalis)

There are six (6) diversion points on this reach of the river (see Figure B-7); three (3) on the east bank and three (3) on the west bank. The three east bank diversion points supply irrigation water to approximately 440 acres to be used for pasture, pears, field corn, beans, oats, and grapes. On the west bank three diversion points supply water to approximately 1,600 acres used for alfalfa, sugar beets, barley, field corn, beans, and tomatoes.

SAN JOAQUIN RIVER

Section 13: Hills Ferry Road Bridge to Crows Landing Road Bridge

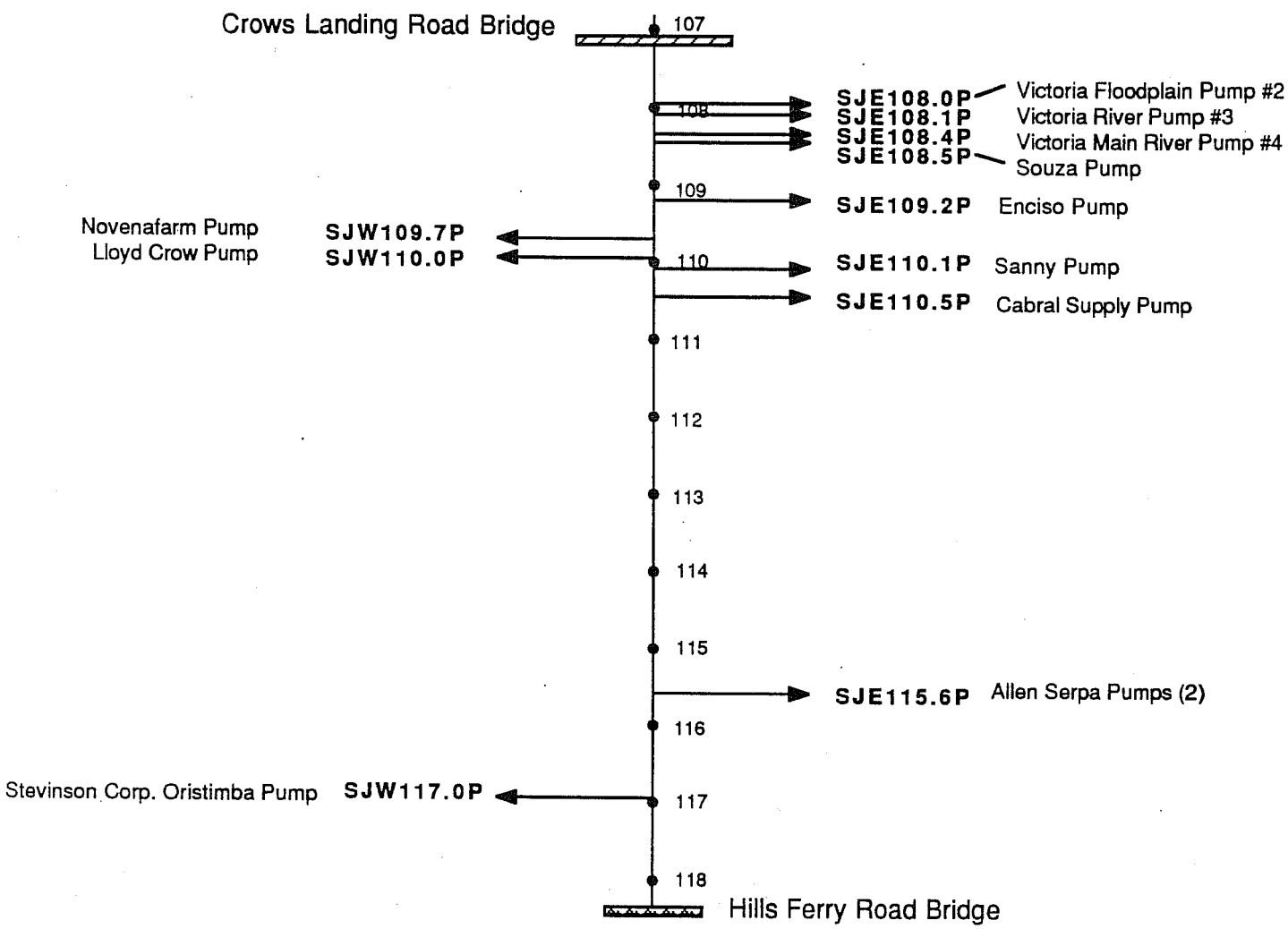

Figure B-3. Water Diversion Points Within River Section 13: Hills Ferry Road Bridge to Crows Landing Road Bridge.

SAN JOAQUIN RIVER

Section 14: Crows Landing Road Bridge to Patterson Bridge

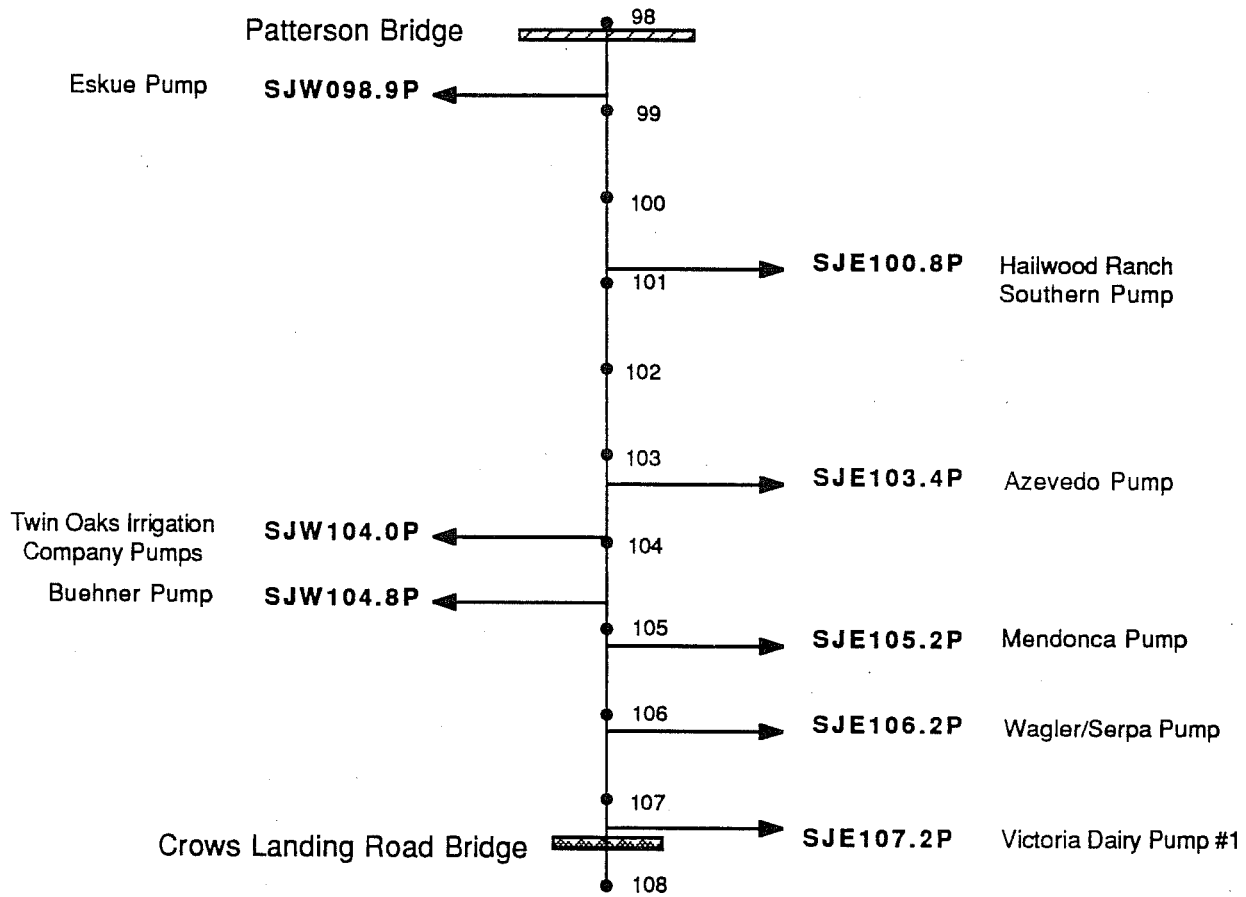

Figure B-4. Water Diversion Points Within River Section 14: Crows Landing Road Bridge to Patterson Bridge.

SAN JOAQUIN RIVER

Section 15: Patterson Bridge to Grayson Road Bridge

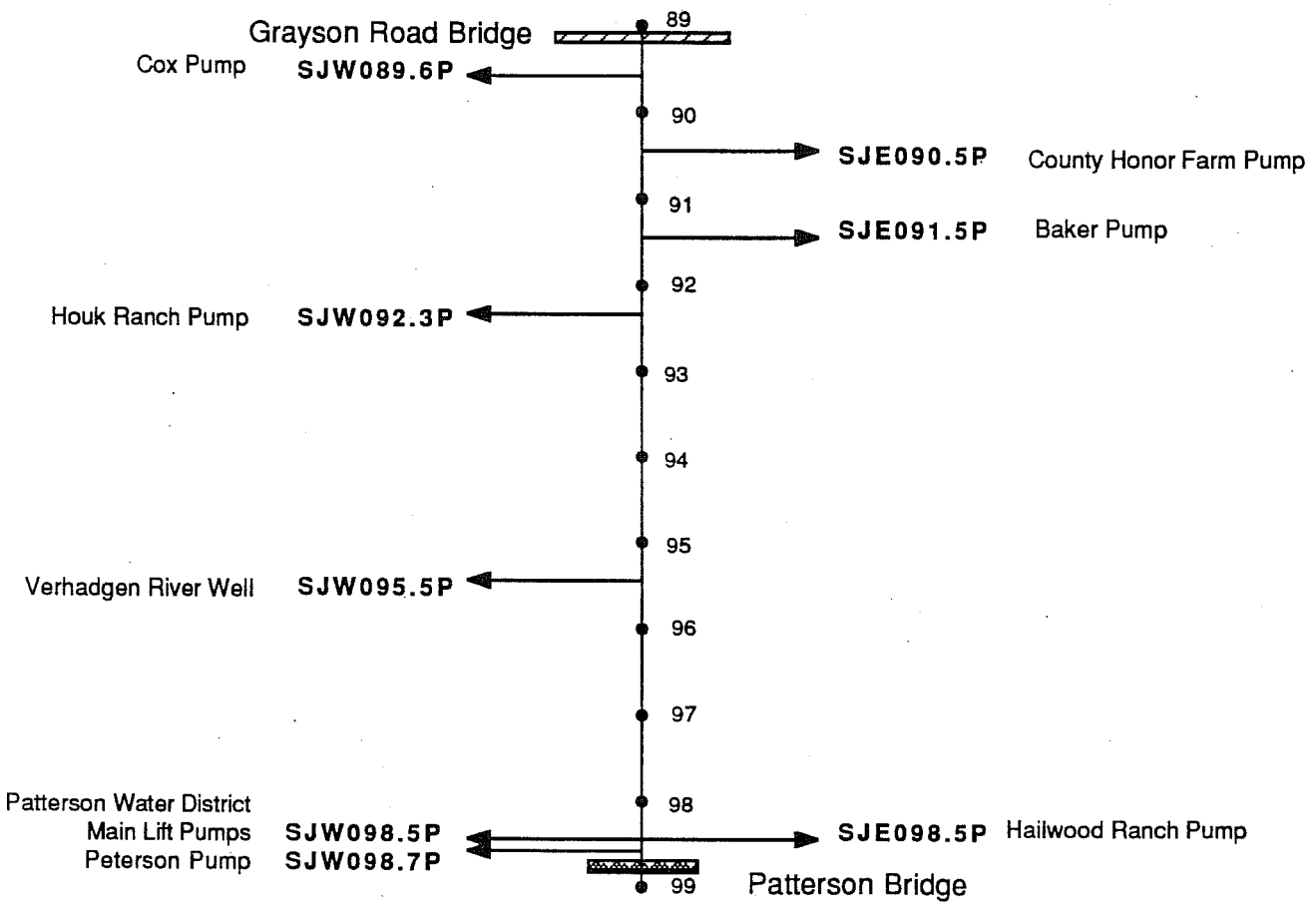

Figure B-5. Water Diversion Points Within River Section 15: Patterson Bridge to Grayson Road Bridge.

SAN JOAQUIN RIVER

Section 16: Grayson Road Bridge to Maze Road Bridge (Hwy.132)

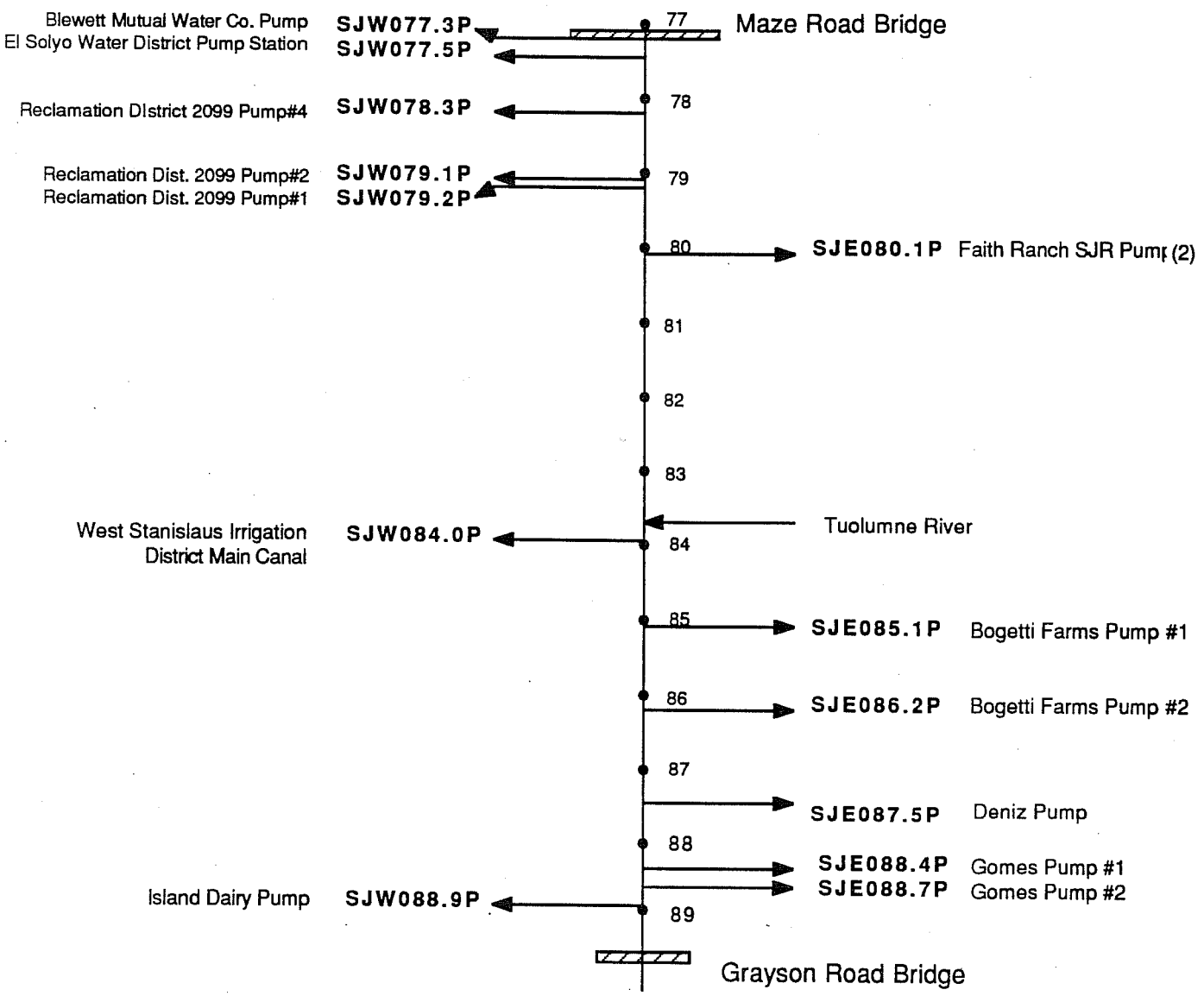

Figure B-6. Water Diversion Points Within River Section 16: Grayson Road Bridge to Maze Road Bridge (Hwy. 132).

SAN JOAQUIN RIVER

Section 17: Maze Road Bridge (Hwy.132) to Airport Way (Vernalis)

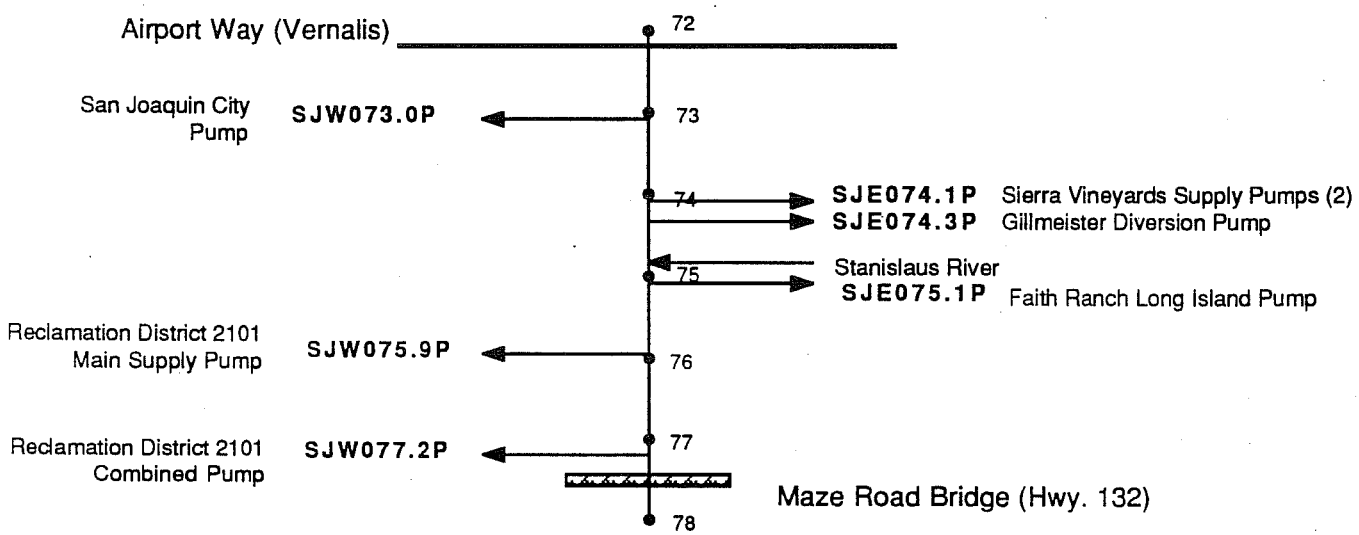

Figure B-7. Water Diversion Points Within River Section 17: Maze Road Bridge (Hwy. 132) to Airport Way (Vernalis).